

Application No.: 09/742,684 Attorney Docket No.: SALK1720-6
Filing Date: December 19, 2000 (088802-3109)
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Amendments to the Claims

Please amend claims 11 and 27, and add new claims 37 and 38, as indicated below in the listing of claims. Please cancel claims 21-24 and 31-34 without prejudice.

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-10. (Cancelled).

11. (Currently amended) A method for screening a collection of compounds to determine those compounds which bind to receptors of the activin/TGF- β superfamily, said method comprising employing a vertebrate activin receptor in a competitive binding assay, wherein said vertebrate activin receptor has binding affinity for activin and has at least about 80% amino acid identity with SEQ ID NO:16; and is encoded by a nucleotide sequence which is:

~~(a) the nucleotide sequence of a cDNA molecule present in a vertebrate library, wherein the noncoding strand of the cDNA molecule hybridizes under conditions of low stringency with a probe comprising the contiguous sequence of nucleotides 128-1609 of SEQ ID NO:15; or~~

~~(b) a sequence degenerate with the sequence of a cDNA molecule according to (a);~~ wherein the receptor is further characterized by having the following domains, reading from the N-terminal end of said protein:

an extracellular, ligand-binding domain,
a hydrophobic, trans-membrane domain, and
an intracellular serine/threonine kinase domain.

12-17. (Cancelled).

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18. (Previously presented) A method according to claim 11, wherein said receptor is encoded by nucleotides having at least 70% sequence identity with respect to the contiguous nucleotide sequence of nucleotides 128-1609 of SEQ ID NO:15.

19. (Previously presented) A method according to claim 11, wherein said receptor is encoded by nucleotides having at least 80% sequence identity with respect to the contiguous nucleotide sequence of nucleotides 128-1609 of SEQ ID NO:15.

20. (Previously presented) A method according to claim 11, wherein said receptor is encoded by nucleotides having at least 90% sequence identity with respect to the contiguous nucleotide sequence of nucleotides 128-1609 of SEQ ID NO:15.

21.-24. (Cancelled).

25. (Previously presented) A method according to claim 11, wherein said receptor comprises the amino acid sequence of residues 20-513 as set forth in SEQ ID NO:16.

26. (Previously presented) A method according to claim 25, wherein said receptor further comprises the amino acid sequence of residues 1-19 as set forth in SEQ ID NO:16.

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27. (Currently amended) A method for screening a collection of compounds to determine those compounds which bind to receptors of the activin/TGF- β superfamily, said method comprising employing a soluble polypeptide in a competitive binding assay,

wherein said soluble polypeptide has binding affinity for activin and has at least about 80% amino acid identity with amino acid residues 20-134 of SEQ ID NO:16 is encoded by a nucleotide sequence which is:

~~(a) the nucleotide sequence of a cDNA molecule present in a vertebrate library, wherein the noncoding strand of the cDNA molecule hybridizes under conditions of low stringency with a probe comprising the contiguous sequence of nucleotides 128-472 of SEQ ID NO: 15; or~~

~~(b) a sequence degenerate with the sequence of a cDNA molecule according to (a).~~

28. (Previously presented) A method according to claim 27, wherein said polypeptide is encoded by nucleotides having at least 70% sequence identity with respect to the contiguous nucleotide sequence of nucleotides 128-472 of SEQ ID NO:15.

29. (Previously presented) A method according to claim 27, wherein said receptor is encoded by nucleotides having at least 80% sequence identity with respect to the contiguous nucleotide sequence of nucleotides 128-472 of SEQ ID NO:15.

30. (Previously presented) A method according to claim 27, wherein said receptor is encoded by nucleotides having at least 90% sequence identity with respect to the contiguous nucleotide sequence of nucleotides 128-472 of SEQ ID NO:15.

31.-34. (Cancelled).

35. (Previously presented) A method according to claim 27, wherein said receptor comprises the amino acid sequence of residues 20-134 as set forth in SEQ ID NO:16.

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36. (Previously presented) A method according to claim 35, wherein said receptor further comprises the amino acid sequence of residues 1-19 as set forth in SEQ ID NO:16.

37. (New) A method for screening a collection of compounds to determine those compounds which bind to receptors of the activin/TGF- β superfamily, said method comprising employing a vertebrate activin receptor in a competitive binding assay,

wherein said vertebrate activin receptor has binding affinity for activin and is encoded by nucleotides having at least 90% sequence homology with respect to the contiguous nucleotide sequence of nucleotides 128-1609 of SEQ ID NO:15.

38. (New) A method according to claim 37, wherein the contiguous nucleotide sequence further comprises nucleotides 71-127 of SEQ ID NO:15.